For the competent person

Installation instructions

VR 61

Mixer module

GB, IE

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1 Safety

1.1 Action-related warnings

Classification of action-related warnings

The action-related warnings are classified in accordance with the severity of the possible danger using the following warning signs and signal words:

Warning symbols and signal words

Danger!
Imminent danger to life or risk of severe personal injury

Danger!
Risk of death from electric shock

Warning.
Risk of minor personal injury

Caution.
Risk of material or environmental damage

1.2 Required personnel qualifications

This manual is intended for persons with the following qualifications.

1.2.1 Authorised competent person

The installation, assembly and removal, start-up, maintenance, repair and decommissioning of Vaillant products and accessories must only be carried out by authorised competent persons.

Note
Each competent person is qualified for specific activities on the basis of their training. They must only work on units if they have the required qualification.

When working on the units, the competent persons must observe all applicable directives, standards, laws and other regulations.

1.3 General safety information

1.3.1 Installation by competent persons only

The product must be installed by a qualified competent person who is responsible for compliance with the applicable requirements, regulations and directives.

- ► Read through these installation instructions carefully.
- ► Carry out the activities that are described in these installation instructions.
- ► During the installation, observe the following safety instructions and regulations.

1.3.2 Material damage due to unsuitable installation room

If you are installing the product in a moist environment, the electronics may be damaged by moisture.

- ► Only install the product in dry rooms.

1.3.3 Danger due to error functions

- ► Ensure that the heating system is in a technically perfect condition.
- ► Ensure that no safety or monitoring devices have been removed, bridged or disabled.
- ► Immediately rectify any faults and damage that may affect safety.
- ► At lengths of over 10 m, 230 V supply lines must be laid separately from sensor or bus lines.
- ► Secure all supply lines in the casing using the enclosed cable terminals.
- ► Do not use the unit's free terminals as supports for other wiring.

1.4 Regulations (guidelines, laws, standards)

1.4.1 Requirements for lines

- ► Use standard commercial lines for the wiring.
- ► Use sheathed cables for 230 V lines (e.g. NYM 3 x 1.5).
- ► Do **not** use any flexible cables for 230 V lines.

Minimum cross-section

Cross-section of 230 V supply line (pump or mixer mains cable)	≥ 1.5 mm²
Cross-section of eBUS line (extra-low voltage)	≥ 0.75 mm²
Cross-section of sensor line (extra-low voltage)	≥ 0.75 mm²

Maximum line length

Sensor lines	≤ 50 m
Bus lines	≤ 300 m

1.4.2 Regulations (directives, laws, standards)

Applies to: Great Britain

All wiring must be in accordance with Building Regulations Part P and BS 7671 (IEE Wiring Regulations), and must be carried out by a suitably qualified person.

Applies to: Republic of Ireland

All wiring must be in accordance with Building Regulations Part P and BS 7671 (IEE Wiring Regulations), and must be carried out by a suitably qualified person.

1.4.3 CE label

CE labelling shows that the products comply with the basic requirements of the following directives as stated on the identification plate:

– 2004/108/EG Electromagnetic compatibility directive

– 2006/95/EG Directive relating to electrical equipment designed for use within certain voltage limits

1.5 Intended use

In the event of inappropriate or improper use, damage to the product and other property may arise.

This product is a system component which is used in conjunction with the VRC 470 or VRC 430 controllers to control two heating circuits, one DHW loading circuit or one circulation pump.

Intended use includes the following:

– observing the included operating, installation and servicing instructions for the Vaillant product and any other system components
– compliance with all inspection and maintenance conditions listed in the instructions.

This product is not designed to be used by persons (including children) with limited physical, mental or sensory capabilities or by persons who do not have enough experience and/or knowledge, unless they are supervised by a person who is responsible for their safety or have been instructed by him/her about how to use the product.

Children must be supervised to ensure that they do not play with the product.

Any other use that is not specified in these instructions, or use beyond that specified in this document shall be considered improper use. Any direct commercial or industrial use is also deemed to be improper.

Caution.

Improper use of any kind is prohibited.

2 Notes on the documentation

2.1 Observing other applicable documents

► You must observe all the operating and installation instructions included with the system components.

2.2 Storing documents

► Pass these instructions and all other applicable documents on to the system operator.

2.3 Applicability of the instructions

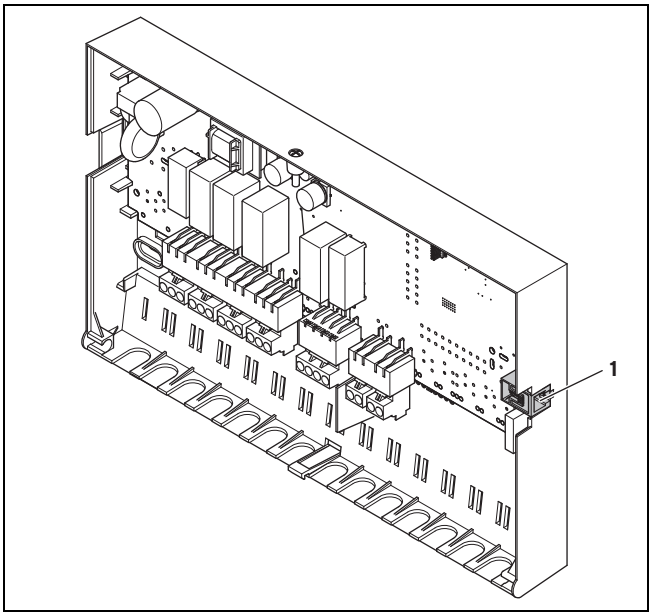
These instructions apply for the following products only:

Article number

Great Britain	0020139853

3 Product overview

3.1 Product features



1 Diagnostic socket (for later use)

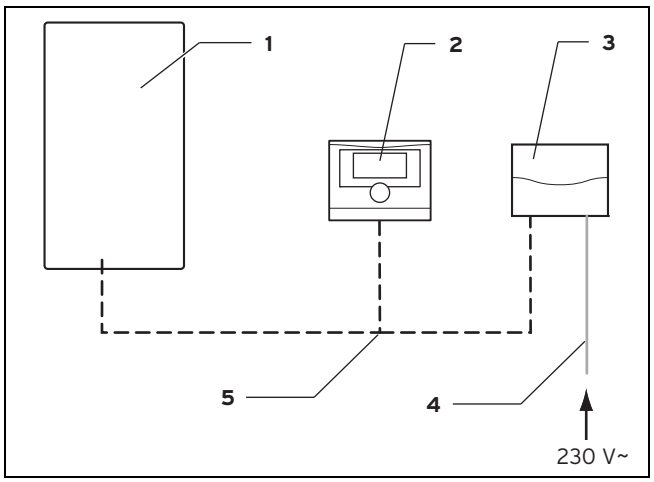
The product is used to extend the controller system.

You can use the product to implement various heating system configurations. (→ Installation instructions for the controller)

You can use the controller to set all of the required parameters.

You can connect corresponding function units directly to the product.

Connecting the mains connection line to the eBUS in the system



1 Boiler
2 Controller
3 VR 61 mixer module
4 230 V mains connection line (on-site)
5 eBUS line

The mains supply for the product is connected on-site. You can branch the eBUS connection to the product at any part of the eBUS system.

3.2 Identification plate

The identification plate is located on the outside of the product's casing.

3.3 Type designation

Abbreviation	Explanation
VR 61	Vaillant mixer module

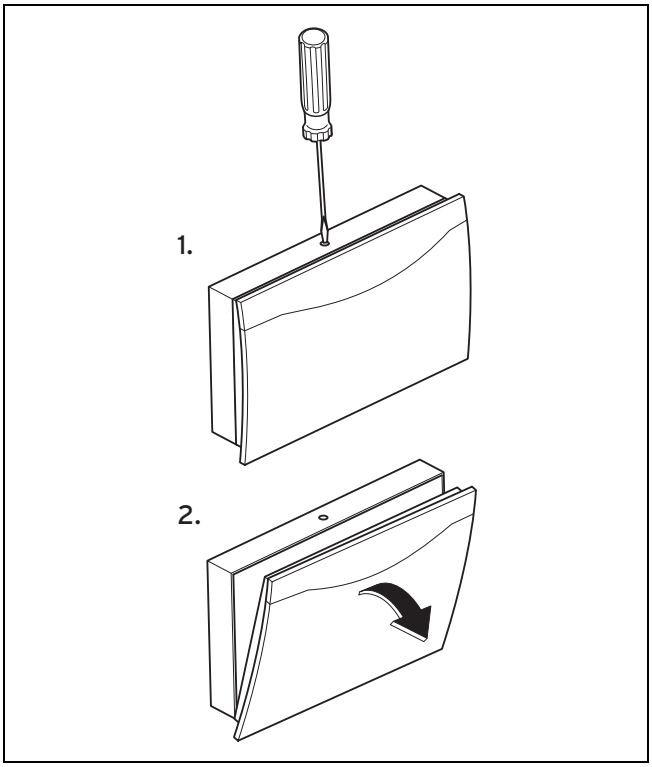
3.4 Checking the scope of delivery

Quantity	Description
1	VR 61 mixer module
1	VR 10 standard sensor
1	Installation accessories (bolts and rawl plugs)
1	Installation instructions

► Check that the scope of delivery is complete.

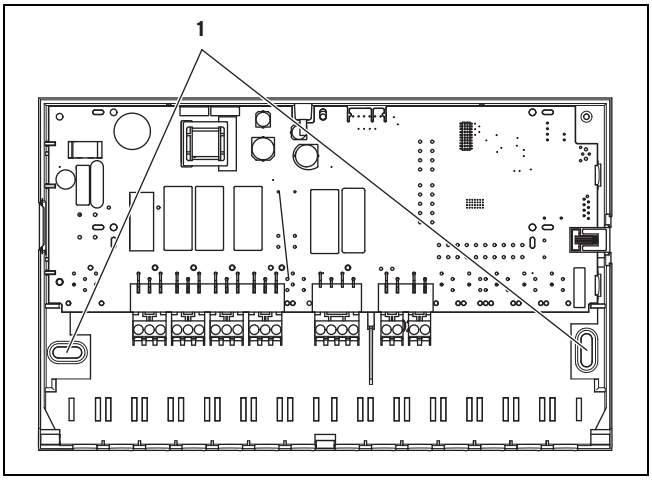
4 Installation

4.1 Opening the casing



1. Loosen the bolt on the upper side of the casing.
2. Fold the casing cover slightly forwards.
3. Remove the casing cover.

4.2 Installing the product



1. Mark the fixing points at the appropriate location to match the mounting holes **(1)**.
2. Drill two holes for suitable rawl plugs.
3. Screw the product in tightly.
4. Connect the product. (→ Page 7)

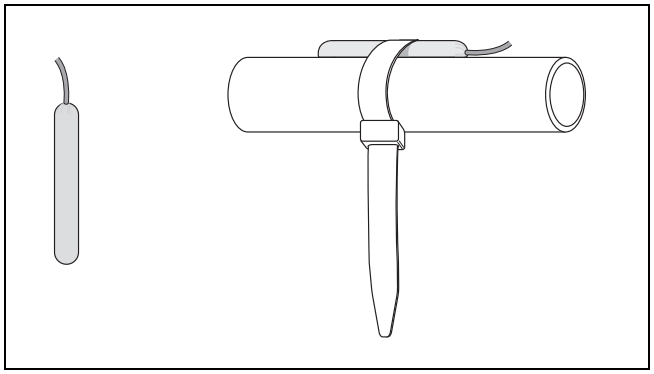
4.3 Closing the casing

1. Insert the casing cover at the bottom into the hinges.
2. Fold up the casing cover.
3. Tighten the bolt on the upper side of the casing.

4.4 Installing the VR 10 standard sensor

Note

You can use the VR 10 as a cylinder sensor (for example, as an immersion sensor in a cylinder dry pocket), as a flow temperature sensor (for example, in the low loss header) or as a surface mount sensor. We recommend that the pipe with the sensor be insulated to ensure optimum temperature recording.



► If you use the VR 10 as a surface mount sensor, secure the VR 10 to a heating pipe using the enclosed strap.

5 Electrical installation

Danger!

Risk of death from live connections!

There is a risk of death from electric shock when working on the open product and in the electronics box of the boiler.

► Before working on the product and in the boiler's electronics box, switch off the power supply.
► Secure the power supply against being switched on again.
► Do not carry out any work when the (green) LED on the PCB of the product is lit.

Danger!

Risk of damage caused by incorrect installation.

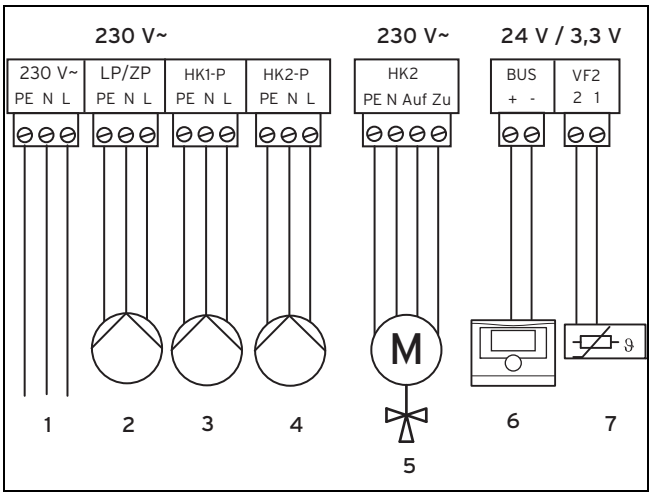
Connecting wires that have been stripped too far may cause short circuits and damage the electronics if a strand accidentally comes loose.

► Only strip the outer sheathing of flexible cables to a maximum of 2.5 cm to prevent short circuits.
► Lay the lines correctly.

► Use strain reliefs.

5.1 Connecting the product

Note
The mains connection cable and the eBUS line are not included in the scope of delivery.



1 Mains connection
2 Cylinder charging pump or circulation pump
3 Pump, heating circuit 1
4 Pump, heating circuit 2
5 Mixer valve
6 VRC 470 controller
7 Flow temperature sensor 2

1. Connect the product using a fixed connection and a partition with a contact opening of at least 3 mm (e.g. fuses or power switches).
2. Wire the product in accordance with the illustration.
3. Connect the cylinder sensor 1 (SP1, VR 10 accessory) to the boiler's cable harness (→ Installation instructions for the boiler).

Note
This also applies when you connect the cylinder charging pump directly to the product.

5.2 Completing the electrical installation

1. Secure all lines in the product using the enclosed cable brackets.
2. Close the casing. (→ Page 6)

6 Starting up the product

1. Ensure that the casing is closed when starting up the product.
2. Start up the product together with the controller (→ Installation instructions for the controller).

7 Customer service

Applies to: Great Britain

To ensure regular servicing, it is strongly recommended that arrangements are made for a Maintenance Agreement. Please contact Vaillant Service Solutions (0870 6060 777) for further details.

8 Technical data

Operating voltage U_{max}	230 V
Power consumption	≤ 2 V·A
Contact loading of the output relay	≤ 2 A
Total current	≤ 4 A
Sensor operating voltage	3.3 V
Cross-section of eBUS line (extra-low voltage)	≥ 0.75 mm²
Cross-section of sensor line (extra-low voltage)	≥ 0.75 mm²
Cross-section of 230 V supply line (pump or mixer mains cable)	≥ 1.5 mm²
Level of protection	IP 20
Protection class	II
Maximum ambient temperature	40 °C
Height	174 mm
Width	272 mm
Depth	52 mm

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